April 23, 2004

Dear Parker-Davis Project Customers

Western hosted an informal meeting on April 8, 2004 to discuss the small customer flexibility proposal regarding early implementation of Post-2008 allocations for small Parker-Davis Project (PDP) electric service customers. Prior to the meeting, Western sent out a March 5, 2004 letter and analysis addressing alternatives for implementation, with the associated capacity and energy impacts for each alternative. During discussions at the April 8, 2004 meeting, suggestions were made that Western look at the possibility of waiving the off-peak minimum requirement for the small customers with rounded-up allocations, the possibility of using the energy banks to pay for purchases, and prepare a cost analysis addressing the alternatives listed in the March 5, 2004 letter. In addition, we received a request from K.R. Saline on behalf of the Town of Thatcher to look at the possibility of shifting their winter P-DP firm electric service energy to the summer. Enclosed is a cost analysis that addresses the following:

- Post-2008 additional capacity and associated energy provided to the small customers at the PDP rate.

- Post-2008 additional capacity and associated energy provided to the small customers at the PDP rate only when excess is projected for the year.

- Waiving the off-peak minimum requirement for small customers with a rounded-up allocation post-2008.

Each alternative looks at the estimated rate impact, which is inclusive of the increased capacity revenue and also the lost opportunity costs of the excess energy that a non-rounded customer would not be receiving.

Using the energy banks to support power purchases for the rounded-up allocations is possible, but would decrease surplus sales generation revenue to the project. At the request of our PDP Advancement of Funds customers in July of 2002, Western included energy bank withdrawals in the FY2003 through FY2006 PDP rate. As a result, using the energy banks for the power purchases would have the same net effect as providing the additional capacity and associated energy to the small customers at the PDP rate.

With regard to the request received on April 16, 2004 to shift energy from the winter season to the summer season, the annual Resource Integration Exchange Program under the PDP Electric Service Contract currently offers this ability. Customers can exchange energy on a monthly and/or seasonal basis. All monthly energy exchanges must balance to zero. Balancing to zero
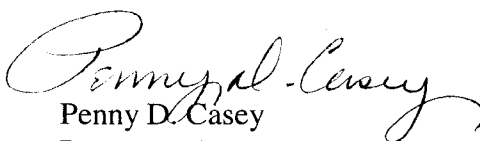
serves as the mechanism to ensure equity amongst the federal integrated projects. Western will accept the letter from K.R. Saline on behalf of the Town of Thatcher as a late submittal, and will include it in the evaluation of the Resource Integration Exchange Program for FY 2005. One option to consider for FY 06 and future Resource Integration Exchanges would be to give preference to the small contractors with rounded up allocations similar to how the excess energy program works for all small contractors.

If the customers desire to implement the round-up allocations as part of the PDP Contract Extension Amendment, a revision to the public record decision published in the May 5, 2003 Federal Register Notice will be required. The extent of the process and the precedent setting nature of such an action is under consideration by Western. An alternative which would provide a similar result which is not precedent setting and which would not require revision of the public record is available by entering into a separate agreement under Section VII of the existing marketing plan.

We are soliciting comments from all PDP customers regarding how to proceed with implementing the request for small customer flexibility for those small customers with a rounded-up allocation post-2008. In your comments, please state which of the alternatives listed above that you support. Comments are due to Western by May 7, 2004.

If you have any questions regarding the enclosed cost analysis, please contact Brian Young at 602-352-2594 or myself at 602-352-2585.

Sincerely,

Penny D. Casey
Resources Manager
  for Power Marketing

Enclosure

# Cost Analysis for Implementing Rounded Allocations

## Background

Western was requested to perform an analysis of the costs associated with implementing the post-2008 rounded allocations at the time the amendments to the Parker-Davis FES contracts commence. The analysis was calculated based on the impact to remaining Parker-Davis generation contractors with non-rounded allocations (NR contractors). The analysis includes (1) costs for providing all energy required for the rounded allocations at the Parker-Davis energy rate; (2) cost for providing energy at Parker-Davis rate only when excess energy is available; and (3) the impact of waiving off-peak minimums. Additional Parker-Davis generation capacity and energy revenues from the rounded contractors are included in the analysis.

## Required Purchases and Excess Energy for Rounded Allocations

Attachment 1 quantifies the expected excess energy available per year based upon the probabilities of Normal, Partial Surplus, and Full Surplus water years. The expected purchases required are then derived by subtracting the expected excess energy from the energy required for the rounded allocations (6.102 GWh annually). The quantities of expected excess energy and purchases are shown for each year, both with MWD taking surplus water and for MWD not taking surplus water. For the case where MWD does not take surplus water, there are no surplus water releases and resultant increased generation except for the small probability of flood control releases shown in FY07 and FY08. The requirement for purchases is about 60% of the required energy over the four year period if MWD takes surplus water and about 90% if they do not.

## Cost Analysis for Rounded Allocations (All Energy at Parker-Davis Rate)

Attachment 2 quantifies the estimated cost impact to the NR contractors if all the energy for the rounded allocations is supplied at the Parker-Davis rate. There are three sections to Attachment 2, with each section using different energy prices to represent the likely range of cost impact. The assumptions are listed at the top of each section and there are separate analyses with and without MWD taking surplus water. The first step is to determine the rate impacts. The cost of purchases is derived based on the amount of purchases required in Attachment 1 and a purchased energy rate based on the assumption that purchases will be made only in off-peak or shoulder hours. The additional capacity payments and energy payments by the rounded contractors are subtracted from the cost of purchases to determine the net cost to rate. (Column A – Column C – Column B = Net Cost to Rate)

The next step is to determine the NR contractors' share of the rate costs and the lost opportunity cost for excess energy. The lost opportunity cost is not an impact to the rate,

but an estimate of the value of the excess energy that a NR customer would not be receiving. The NR contractors' share of rate costs is based upon their share of the total contract capacity and energy allocations including the rounded allocations. The NR contractors' share of excess energy is based upon current excess energy methodology where small contractors receive a larger share of the excess energy. The lost opportunity cost is determined from the same off-peak price used for purchases, less the cost of energy at the Parker-Davis rate. The rate used is the current value of $2.77/MWh with an additional component for the surcharge of $3.50 after June 1, 2005. ($3.50 is the average of the $4.50 surcharge for Arizona contractors and $2.50 surcharge for California and Nevada contractors.) At the bottom of each page, the total rate costs and lost opportunity costs for the NR contractors are shown for the four-year period. A per MW value is also shown for both rate costs and lost opportunity costs by dividing the total cost by the summer CROD for the NR contractors. This, allows each contractor to approximate the cost associated with their allocation by multiplying the per MW values by their summer CROD.

Section 1 uses a purchase price of $34.50/MWh which is the estimated off-peak price based upon forward Palo Verde index prices for 2005 and 2006. Section 2 uses a purchase price of $24.00/MWh based on the average price of WALC energy sales (primarily off-peak) in FY03. Section 3 uses a purchase price of $15.00/MWh, which is the average price of WALC energy sales during the lowest price month in FY03. The per MW values for each Section are shown in the Attachment 2 Summary. The total impact per MW for each option is shown in the right-hand column. For example: using the Analysis A, Medium Option Energy Price of $24.00/MWh, the total impact per MW is $1460.74 over the four-year period. Thus for a contractor with a 10-MW summer allocation, the total impact would be 10 x ($1460.74) = $14,607.40 under this scenario. Individual contractors could interpolate between the three prices shown and/or use different prices for rate costs and lost opportunity costs to best estimate their own impact.

The total impacts are somewhat higher when less excess is available under each option because the NR contractors pay a higher share of purchased energy with no offset to the purchased energy cost which occurs in evaluating the lost opportunity costs. The most significant variable that would cause the costs to change is the off-peak market price of energy. Another factor would be a commitment to making the purchase at the start of a fiscal year rather than waiting to near the end of the year to see if a purchase is required. This would allow the purchases to be made at better prices by making selective purchases during the year instead of making all the purchases in the summer season.

Cost Analysis for Rounded Allocations (Excess Energy at Parker-Davis Rate)

Attachment 3 quantifies the estimated cost impact to the NR contractors if energy for the rounded allocations is supplied at the Parker-Davis rate only if excess energy is available. There are three sections to Attachment 2, with each section using different energy prices to represent the likely range of cost impact. The assumptions are listed at the top of each section and there are separate analyses with and without MWD taking surplus water. The first step is to determine the rate impacts. Under this scenario, since no purchases would

be made from project revenues, the only impact to the Parker-Davis rate would be additional capacity revenue from the rounded contractors. Thus, the net cost to rate is a negative value, which means that there is revenue resulting from the additional capacity sales and there are no costs associated with purchased power.

The next step is to determine the NR contractors' share of the rate costs and lost opportunity costs for excess energy, and the values used are the same as in Attachment 2. In this analysis, a slightly different value could be used for the NR contractors' share of contract energy, since the rounded contractors are not getting all the energy at the Parker-Davis rate. At the bottom of each page, the total rate costs and lost opportunity costs for the NR contractors are shown for the four-year period. A per MW value is also shown for both rate costs and lost opportunity costs by dividing the total cost by the summer CROD for the NR contractors. This allows each contractor to approximate the cost associated with their allocation by multiplying the per MW values by their summer CROD

The same three prices were used as in Attachment 2. The per MW values for each Section are shown in the Attachment 3 Summary. The impact for each option is far lower than in Attachment 2 since no purchase costs are included. In fact, under all the options under Analysis B (since MWD does not take surplus water), there is actually a cost savings to the NR contractor. This is because the rounded contractors would be paying for capacity with little associated energy under this scenario. The cost impacts are highly dependent on the amount of excess energy available.

## Cost Savings for Waiving Off-Peak Minimums

An alternative to providing energy for the rounded allocations was proposed in which the off-peak minimum requirements would be waived for the rounded contractors. Attachment 4 shows the current off-peak energy requirements for these contractors. A cost savings is then determined using the estimated difference in on-peak and off-peak energy prices. This shows a total cost savings to the rounded contractors of about $111,000 annually or about $443,000 over the four year period. This would not impact the NR contractors because of the small amount of energy involved. There would be no need to increase the NR contractors' minimum off-peak requirement to offset the decrease of the rounded contractors' minimum requirement.

## Summary

The estimated cost impact to the NR customers for providing all energy for rounded allocations at the Parker-Davis rate ranged between about $710 per MW and $2,444 per MW of summer CROD for the four year period. Under current market conditions, purchase prices around the Med Option value of $24.00/MWh could likely be achieved by purchasing energy sold by WALC in off-peak hours. This price would vary primarily with the price of spot market energy.

The estimated cost for supplying only excess energy at the Parker-Davis rate is expected to vary between a cost of $677 per MW to a savings of $160 per MW of summer CROD over the four year period. The actual cost could vary considerably outside this already large range if more excess energy than expected is available. However, the cost is always less than or equal to the cost of supplying all energy at the Parker-Davis rate and expected to be far less under most circumstances. The benefits to the rounded contractor for excess only alternatives are diminished or eliminated as the amount of excess energy available is reduced. These contractors would pay for capacity with little associated energy.

Last, the proposal to waive the rounded contractors' off-peak minimums would not impact the NR contractors, but would provide an estimated cost saving of $443,000 over the four year period.

**Attachment 1**
**Estimated Purchases and Excess Energy Required for Rounded Allocations**

Required Annual Energy =                    6.102 GWh

For Normal Water Year:

|  |  | % of Total |
|---|---|---|
| Est. Excess = | 0.588 GWh | 9.64% |
| Est. Purchases = | 5.514 GWh | 90.36% |

For Partial Surplus Water Year:

|  |  | % of Total |
|---|---|---|
| Est. Excess = | 4.515 GWh | 74.00% |
| Est. Purchases = | 1.587 GWh | 26.00% |

For Full Surplus Water Year:

|  |  | % of Total |
|---|---|---|
| Est. Excess = | 6.102 GWh | 100.00% |
| Est. Purchases = | 0 GWh | 0.00% |

**MWD Takes Surplus Water**

| Year | Normal Probability (%) | Excess for Normal Prob (GWh) | Partial Surp. Probability (%) | Excess for Partial Prob (GWh) | Full Surp. Probability (%) | Excess for Full Prob (GWh) | Est. Excess Available (GWh) | Estimated Purchased (GWh) | Percent Purchased (%) |
|---|---|---|---|---|---|---|---|---|---|
| FY05 | 0.00% | 0.000 | 100.00% | 4.515 | 0.00% | 0.000 | 4.515 | 1.587 | 26.00% |
| FY06 | 85.42% | 0.502 | 11.46% | 0.517 | 3.13% | 0.191 | 1.211 | 4.891 | 80.16% |
| FY07 | 75.79% | 0.446 | 10.53% | 0.475 | 13.68% | 0.835 | 1.756 | 4.346 | 71.22% |
| FY08 | 70.21% | 0.413 | 10.64% | 0.480 | 19.15% | 1.169 | 2.062 | 4.040 | 66.21% |
| **4-Year Avg** |  |  |  |  |  |  | 2.386 | 3.716 | 60.90% |

**MWD Does Not Take Surplus Water**

| Year | Normal Probability (%) | Excess for Normal Prob (GWh) | Flood Control* Probability (%) | Excess for Flood Prob (GWh) | Est. Excess Available (GWh) | Estimated Purchased (GWh) | Percent Purchased (%) |
|---|---|---|---|---|---|---|---|
| FY05 | 100.00% | 0.588 | 0.00% | 0.000 | 0.588 | 5.514 | 90.36% |
| FY06 | 100.00% | 0.588 | 0.00% | 0.000 | 0.588 | 5.514 | 90.36% |
| FY07 | 99.00% | 0.582 | 1.00% | 0.061 | 0.643 | 5.459 | 89.46% |
| FY08 | 98.00% | 0.576 | 2.00% | 0.122 | 0.698 | 5.404 | 88.56% |
| **4-Year Avg** |  |  |  |  | 0.629 | 5.473 | 89.69% |

* Represents probability of flood control releases. The is no Partial or Full Surplus probability if MWD does not take surplus.

# Attachment 2 - Section 1
## Analysis of Cost Impact of Rounded Allocations
## Energy for Allocations at Parker-Davis Rate
## (Prices at PV Index - High Option)

**Assumptions**

1. Energy for rounded allocations supplied at Parker-Davis rate even if purchases are required.
2. Purchases made in off-peak and shoulder hours at an average price =          $34.50 /MWh
3. Lost opportunity cost for excess energy = PV off-peak index rate less P-D energy rate (& surcharge when applicable).
4. FY04 Rate Brochure used for Parker-Davis Rates
5. Impact to Parker-Davis generation customers only.

## Analysis A - MWD Takes Surplus Water

**Rate Impact**

| | Contractor | Add. Energy (KWh) | Est. Energy Purchased (KWh) | A Purchases Cost ($) | B Add. Energy Revenue ($) | C Add. Capacity Revenue ($) | (A - B - C) Net Cost to Rate ($) |
|---|---|---|---|---|---|---|---|
| **FY05** | FMIT | 89,606 | 23,298 | $803.77 | $64.53 | $205.70 | $533.53 |
| | Fredonia | 1,441,919 | 374,899 | $12,934.01 | $1,038.47 | $3,534.41 | $8,361.13 |
| | Thatcher | 3,513,900 | 913,614 | $31,519.68 | $2,530.71 | $10,043.00 | $18,945.97 |
| | Wickenburg | 543,853 | 141,402 | $4,878.36 | $391.68 | $1,320.11 | $3,166.57 |
| | YID | 512,300 | 133,198 | $4,595.33 | $368.96 | $1,669.80 | $2,556.57 |
| | **FY05 Total** | 6,101,578 | 1,586,410 | $54,731.15 | $4,394.36 | $16,773.02 | $33,563.78 |
| **FY06** | FMIT | 89,606 | 71,827 | $2,478.02 | $198.96 | $205.70 | $2,073.36 |
| | Fredonia | 1,441,919 | 1,155,819 | $39,875.75 | $3,201.62 | $3,534.41 | $33,139.72 |
| | Thatcher | 3,513,900 | 2,816,685 | $97,175.63 | $7,802.22 | $10,043.00 | $79,330.41 |
| | Wickenburg | 543,853 | 435,944 | $15,040.06 | $1,207.56 | $1,320.11 | $12,512.38 |
| | YID | 512,300 | 410,651 | $14,167.47 | $1,137.50 | $1,669.80 | $11,360.17 |
| | **FY06 Total** | 6,101,578 | 4,890,926 | $168,736.93 | $13,547.86 | $16,773.02 | $138,416.05 |
| **FY07** | FMIT | 89,606 | 63,821 | $2,201.84 | $176.79 | $205.70 | $1,819.35 |
| | Fredonia | 1,441,919 | 1,027,000 | $35,431.50 | $2,844.79 | $3,534.41 | $29,052.30 |
| | Thatcher | 3,513,900 | 2,502,759 | $86,345.18 | $6,932.64 | $10,043.00 | $69,369.54 |
| | Wickenburg | 543,853 | 387,357 | $13,363.81 | $1,072.98 | $1,320.11 | $10,970.72 |
| | YID | 512,300 | 364,883 | $12,588.47 | $1,010.73 | $1,669.80 | $9,907.95 |
| | **FY07 Total** | 6,101,578 | 4,345,821 | $149,930.81 | $12,037.92 | $16,773.02 | $121,119.87 |
| **FY08** | FMIT | 89,606 | 59,329 | $2,046.85 | $164.34 | $205.70 | $1,676.81 |
| | Fredonia | 1,441,919 | 954,707 | $32,937.38 | $2,644.54 | $3,534.41 | $26,758.43 |
| | Thatcher | 3,513,900 | 2,326,583 | $80,267.10 | $6,444.63 | $10,043.00 | $63,779.46 |
| | Wickenburg | 543,853 | 360,090 | $12,423.09 | $997.45 | $1,320.11 | $10,105.53 |
| | YID | 512,300 | 339,198 | $11,702.33 | $939.58 | $1,669.80 | $9,092.96 |
| | **FY08 Total** | 6,101,578 | 4,039,906 | $139,376.75 | $11,190.54 | $16,773.02 | $111,413.19 |
| **FY05-FY08 Total** | FMIT | 358,424 | 218,275 | $7,530.47 | $604.62 | $822.80 | $6,103.05 |
| | Fredonia | 5,767,676 | 3,512,424 | $121,178.64 | $9,729.42 | $14,137.64 | $97,311.59 |
| | Thatcher | 14,055,600 | 8,559,640 | $295,307.60 | $23,710.20 | $40,172.00 | $231,425.39 |
| | Wickenburg | 2,175,412 | 1,324,792 | $45,705.32 | $3,669.67 | $5,280.44 | $36,755.21 |
| | YID | 2,049,200 | 1,247,931 | $43,053.61 | $3,456.77 | $6,679.20 | $32,917.64 |
| | **FY05-FY08 Total** | 24,406,312 | 14,863,062 | $512,775.64 | $41,170.68 | $67,092.08 | $404,512.88 |

### Total Cost to Non-Rounded (NR) Contractors

| | |
|---|---|
| NR Contractor's Share of Contract Capacity = | 97.21% (with rounded up allocations) |
| NR Contractor's Share of Contract Energy = | 97.20% (with rounded up allocations) |
| **NR Contractor's Share of Rate Costs =** | **97.20%** |

| | |
|---|---|
| **NR Contractor's Share of Excess Energy =** | 90.17% (based on current excess energy methodology) |
| **Lost Opportunity Cost of Excess Energy =** | $31.73 /MWh (PV off-peak minus PD energy rate) |
| **Lost Opportunity Cost of Excess Energy (after 6-1-05) =** | $28.23 /MWh (Reduced by average surcharge of $3.5/MWh) |

| | A Net Cost to Rate ($) | NR Contractors Rate Share (%) | NR Contractors Rate Cost ($) | A/276.321 NR Contractors Rate Cost ($/MW Alloc.) | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B Lost Opportunity Cost ($) | B/276.321 Lost Opportunity Cost ($/MW Alloc.) |
|---|---|---|---|---|---|---|---|---|
| FY05 | $33,563.78 | 97.20% | $32,625.43 | $118.07 | 4,515,480 | 4,071,608 | $124,489.42 | $450.52 |
| FY06 | $138,416.05 | 97.20% | $134,546.35 | $486.92 | 1,210,736 | 1,091,721 | $30,819.28 | $111.53 |
| FY07 | $121,119.87 | 97.20% | $117,733.72 | $426.08 | 1,755,879 | 1,583,276 | $44,695.88 | $161.75 |
| FY08 | $111,413.19 | 97.20% | $108,298.41 | $391.93 | 2,061,815 | 1,859,138 | $52,483.48 | $189.94 |
| Total | | | $393,203.90 | $1,423.00 | | | $252,488.06 | $913.75 |

## Analysis of Cost Impact of Rounded Allocations
### Energy for Allocations at Parker-Davis Rate
### (Prices at PV Index - High Option)

### Analysis B - MWD Does Not Take Surplus Water

**Rate Impact**

| | Contractor | Add. Energy (KWh) | Est. Energy Purchased (KWh) | Purchases Cost ($) | Add. Energy Revenue ($) | Add. Capacity Revenue ($) | Net Cost to Rate ($) |
|---|---|---|---|---|---|---|---|
| FY05 | FMIT | 89,606 | 80,971 | $2,793.51 | $224.29 | $205.70 | **$2,363.52** |
| | Fredonia | 1,441,919 | 1,302,973 | $44,952.57 | $3,609.24 | $3,534.41 | **$37,808.92** |
| | Thatcher | 3,513,900 | 3,175,294 | $109,547.65 | $8,795.56 | $10,043.00 | **$90,709.08** |
| | Wickenburg | 543,853 | 491,446 | $16,954.90 | $1,361.31 | $1,320.11 | **$14,273.48** |
| | YID | 512,300 | 462,934 | $15,971.22 | $1,282.33 | $1,669.80 | **$13,019.09** |
| | **FY05 Total** | 6,101,578 | 5,513,619 | $190,219.84 | $15,272.72 | $16,773.02 | **$158,174.10** |
| FY06 | FMIT | 89,606 | 80,971 | $2,793.51 | $224.29 | $205.70 | **$2,363.52** |
| | Fredonia | 1,441,919 | 1,302,973 | $44,952.57 | $3,609.24 | $3,534.41 | **$37,808.92** |
| | Thatcher | 3,513,900 | 3,175,294 | $109,547.65 | $8,795.56 | $10,043.00 | **$90,709.08** |
| | Wickenburg | 543,853 | 491,446 | $16,954.90 | $1,361.31 | $1,320.11 | **$14,273.48** |
| | YID | 512,300 | 462,934 | $15,971.22 | $1,282.33 | $1,669.80 | **$13,019.09** |
| | **FY06 Total** | 6,101,578 | 5,513,619 | $190,219.84 | $15,272.72 | $16,773.02 | **$158,174.10** |
| FY07 | FMIT | 89,606 | 80,162 | $2,765.58 | $222.05 | $205.70 | **$2,337.83** |
| | Fredonia | 1,441,919 | 1,289,943 | $44,503.04 | $3,573.14 | $3,534.41 | **$37,395.49** |
| | Thatcher | 3,513,900 | 3,143,541 | $108,452.17 | $8,707.61 | $10,043.00 | **$89,701.56** |
| | Wickenburg | 543,853 | 486,532 | $16,785.35 | $1,347.69 | $1,320.11 | **$14,117.55** |
| | YID | 512,300 | 458,304 | $15,811.50 | $1,269.50 | $1,669.80 | **$12,872.20** |
| | **FY07 Total** | 6,101,578 | 5,458,482 | $188,317.65 | $15,120.00 | $16,773.02 | **$156,424.63** |
| FY08 | FMIT | 89,606 | 79,352 | $2,737.64 | $219.80 | $205.70 | **$2,312.14** |
| | Fredonia | 1,441,919 | 1,276,914 | $44,053.52 | $3,537.05 | $3,534.41 | **$36,982.06** |
| | Thatcher | 3,513,900 | 3,111,788 | $107,356.69 | $8,619.65 | $10,043.00 | **$88,694.04** |
| | Wickenburg | 543,853 | 481,617 | $16,615.80 | $1,334.08 | $1,320.11 | **$13,961.61** |
| | YID | 512,300 | 453,675 | $15,651.79 | $1,256.68 | $1,669.80 | **$12,725.31** |
| | **FY08 Total** | 6,101,578 | 5,403,346 | $186,415.45 | $14,967.27 | $16,773.02 | **$154,675.16** |
| FY05-FY08 | FMIT | 358,424 | 321,456 | $11,090.25 | $890.43 | $822.80 | **$9,377.01** |
| Total | Fredonia | 5,767,676 | 5,172,803 | $178,461.70 | $14,328.66 | $14,137.64 | **$149,995.40** |
| | Thatcher | 14,055,600 | 12,605,918 | $434,904.16 | $34,918.39 | $40,172.00 | **$359,813.76** |
| | Wickenburg | 2,175,412 | 1,951,042 | $67,310.95 | $5,404.39 | $5,280.44 | **$56,626.12** |
| | YID | 2,049,200 | 1,837,847 | $63,405.73 | $5,090.84 | $6,679.20 | **$51,635.69** |
| | **FY05-FY08 Total** | **24,406,312** | **21,889,066** | **$755,172.78** | **$60,632.71** | **$67,092.08** | **$627,447.99** |

**Total Cost to Non-Rounded (NR) Contractors**

NR Contractor's Share of Contract Capacity =       97.21% (with rounded up allocations)
NR Contractor's Share of Contract Energy =        97.20% (with rounded up allocations)
**NR Contractor's Share of Rate Costs =**        **97.20%**

**NR Contractor's Share of Excess Energy =**        **90.17%** (based on current excess energy methodology)
**Lost Opportunity Cost of Excess Energy =**        **$31.73** /MWh     (PV off-peak minus PD energy rate)
**Lost Opportunity Cost of Excess Energy (after 6-1-05) =**    **$28.23** /MWh     (Reduced by average surcharge of $3.5/MWh)

| | Net Cost to Rate ($) | NR Contractors Rate Share (%) | A<br>NR Contractors Rate Cost ($) | A/276.321<br>**NR Contractors Rate Cost ($/MW Alloc.)** | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B<br>Lost Opportunity Cost ($) | B/276.321<br>Lost Opportunity Cost ($/MW Alloc.) |
|---|---|---|---|---|---|---|---|---|
| FY05 | $158,174.10 | 97.20% | $153,752.02 | $556.43 | 588,000 | 530,200 | $16,210.85 | $58.67 |
| FY06 | $158,174.10 | 97.20% | $153,752.02 | $556.43 | 588,000 | 530,200 | $14,967.53 | $54.17 |
| FY07 | $156,424.63 | 97.20% | $152,051.46 | $550.27 | 643,140 | 579,919 | $16,371.12 | $59.25 |
| FY08 | $154,675.16 | 97.20% | $150,350.90 | $544.12 | 698,280 | 629,639 | $17,774.71 | $64.33 |
| Total | | | **$609,906.40** | **$2,207.24** | | | **$65,324.22** | **$236.41** |

**Analysis of Cost Impact of Rounded Allocations**
**Energy for Allocations at Parker-Davis Rate**
**(Prices at WALC FY03 Avg Sales - Med Option)**

**Analysis B - MWD Does Not Take Surplus Water**

**Rate Impact**

|  | Contractor | Add. Energy (KWh) | Est. Energy Purchased (KWh) | Purchases Cost ($) | Add. Energy Revenue ($) | Add. Capacity Revenue ($) | Net Cost to Rate ($) |
|---|---|---|---|---|---|---|---|
| **FY05** | FMIT | 89,606 | 80,971 | $1,943.31 | $224.29 | $205.70 | **$1,513.32** |
|  | Fredonia | 1,441,919 | 1,302,973 | $31,271.35 | $3,609.24 | $3,534.41 | **$24,127.71** |
|  | Thatcher | 3,513,900 | 3,175,294 | $76,207.06 | $8,795.56 | $10,043.00 | **$57,368.49** |
|  | Wickenburg | 543,853 | 491,446 | $11,794.71 | $1,361.31 | $1,320.11 | **$9,113.30** |
|  | YID | 512,300 | 462,934 | $11,110.41 | $1,282.33 | $1,669.80 | **$8,158.29** |
|  | **FY05 Total** | 6,101,578 | 5,513,619 | $132,326.85 | $15,272.72 | $16,773.02 | **$100,281.10** |
| **FY06** | FMIT | 89,606 | 80,971 | $1,943.31 | $224.29 | $205.70 | **$1,513.32** |
|  | Fredonia | 1,441,919 | 1,302,973 | $31,271.35 | $3,609.24 | $3,534.41 | **$24,127.71** |
|  | Thatcher | 3,513,900 | 3,175,294 | $76,207.06 | $8,795.56 | $10,043.00 | **$57,368.49** |
|  | Wickenburg | 543,853 | 491,446 | $11,794.71 | $1,361.31 | $1,320.11 | **$9,113.30** |
|  | YID | 512,300 | 462,934 | $11,110.41 | $1,282.33 | $1,669.80 | **$8,158.29** |
|  | **FY06 Total** | 6,101,578 | 5,513,619 | $132,326.85 | $15,272.72 | $16,773.02 | **$100,281.10** |
| **FY07** | FMIT | 89,606 | 80,162 | $1,923.88 | $222.05 | $205.70 | **$1,496.13** |
|  | Fredonia | 1,441,919 | 1,289,943 | $30,958.64 | $3,573.14 | $3,534.41 | **$23,851.09** |
|  | Thatcher | 3,513,900 | 3,143,541 | $75,444.99 | $8,707.61 | $10,043.00 | **$56,694.38** |
|  | Wickenburg | 543,853 | 486,532 | $11,676.76 | $1,347.69 | $1,320.11 | **$9,008.96** |
|  | YID | 512,300 | 458,304 | $10,999.31 | $1,269.50 | $1,669.80 | **$8,060.00** |
|  | **FY07 Total** | 6,101,578 | 5,458,482 | $131,003.58 | $15,120.00 | $16,773.02 | **$99,110.56** |
| **FY08** | FMIT | 89,606 | 79,352 | $1,904.45 | $219.80 | $205.70 | **$1,478.94** |
|  | Fredonia | 1,441,919 | 1,276,914 | $30,645.93 | $3,537.05 | $3,534.41 | **$23,574.46** |
|  | Thatcher | 3,513,900 | 3,111,788 | $74,682.92 | $8,619.65 | $10,043.00 | **$56,020.26** |
|  | Wickenburg | 543,853 | 481,617 | $11,558.82 | $1,334.08 | $1,320.11 | **$8,904.63** |
|  | YID | 512,300 | 453,675 | $10,888.20 | $1,256.68 | $1,669.80 | **$7,961.72** |
|  | **FY08 Total** | 6,101,578 | 5,403,346 | $129,680.31 | $14,967.27 | $16,773.02 | **$97,940.02** |
| **FY05-FY08** | FMIT | 358,424 | 321,456 | $7,714.96 | $890.43 | $822.80 | **$6,001.72** |
| **Total** | Fredonia | 5,767,676 | 5,172,803 | $124,147.27 | $14,328.66 | $14,137.64 | **$95,680.97** |
|  | Thatcher | 14,055,600 | 12,605,918 | $302,542.02 | $34,918.39 | $40,172.00 | **$227,451.63** |
|  | Wickenburg | 2,175,412 | 1,951,042 | $46,825.01 | $5,404.39 | $5,280.44 | **$36,140.18** |
|  | YID | 2,049,200 | 1,837,847 | $44,108.33 | $5,090.84 | $6,679.20 | **$32,338.30** |
|  | **FY05-FY08 Total** | 24,406,312 | 21,889,066 | $525,337.59 | $60,632.71 | $67,092.08 | **$397,612.79** |

**Total Cost to Non-Rounded (NR) Contractors**

NR Contractor's Share of Contract Capacity = 97.21% (with rounded up allocations)
NR Contractor's Share of Contract Energy = 97.20% (with rounded up allocations)
**NR Contractor's Share of Rate Costs =** **97.20%**

**NR Contractor's Share of Excess Energy =** 90.17% (based on current excess energy methodology)
**Lost Opportunity Cost of Excess Energy =** $21.23 /MWh (PV off-peak minus PD energy rate)
**Lost Opportunity Cost of Excess Energy (after 6-1-05) =** $17.73 /MWh (Reduced by average surcharge of $3.5/MWh)

|  | Net Cost to Rate ($) | NR Contractors Rate Share (%) | A<br>NR Contractors Rate Cost ($) | A/276.321<br>**NR Contractors Rate Cost ($/MW Alloc.)** | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B<br>Lost Opportunity Cost ($) | B/276.321<br>Lost Opportunity Cost ($/MW Alloc.) |
|---|---|---|---|---|---|---|---|---|
| **FY05** | $100,281.10 | 97.20% | $97,477.54 | $352.77 | 588,000 | 530,200 | $10,643.76 | $38.52 |
| **FY06** | $100,281.10 | 97.20% | $97,477.54 | $352.77 | 588,000 | 530,200 | $9,400.44 | $34.02 |
| **FY07** | $99,110.56 | 97.20% | $96,339.73 | $348.65 | 643,140 | 579,919 | $10,281.97 | $37.21 |
| **FY08** | $97,940.02 | 97.20% | $95,201.91 | $344.53 | 698,280 | 629,639 | $11,163.50 | $40.40 |
| **Total** |  |  | $386,496.72 | $1,398.72 |  |  | $41,489.67 | $150.15 |

## Analysis of Cost Impact of Rounded Allocations
## Energy for Allocations at Parker-Davis Rate
## (Prices at WALC FY03 Avg Sales - Med Option)

**Assumptions**

1. Energy for rounded allocations supplied at Parker-Davis rate even if purchases are required.
2. Purchases made in off-peak and shoulder hours at an WALC FY03 average sale price =     $24.00 /MWh
3. Lost opportunity cost for excess energy = Purchase price rate less P-D energy rate (& surcharge when applicable).
4. FY04 Rate Brochure used for Parker-Davis Rates
5. Impact to Parker-Davis generation customers only.

### Analysis A - MWD Takes Surplus Water

**Rate Impact**

| | Contractor | Add. Energy (KWh) | Est. Energy Purchased (KWh) | A Purchases Cost ($) | B Add. Energy Revenue ($) | C Add. Capacity Revenue ($) | (A - B - C) Net Cost to Rate ($) |
|---|---|---|---|---|---|---|---|
| FY05 | FMIT | 89,606 | 23,298 | $559.14 | $64.53 | $205.70 | $288.91 |
| | Fredonia | 1,441,919 | 374,899 | $8,997.57 | $1,038.47 | $3,534.41 | $4,424.69 |
| | Thatcher | 3,513,900 | 913,614 | $21,926.74 | $2,530.71 | $10,043.00 | $9,353.03 |
| | Wickenburg | 543,853 | 141,402 | $3,393.64 | $391.68 | $1,320.11 | $1,681.85 |
| | YID | 512,300 | 133,198 | $3,196.75 | $368.96 | $1,669.80 | $1,157.99 |
| | **FY05 Total** | 6,101,578 | 1,586,410 | $38,073.85 | $4,394.36 | $16,773.02 | $16,906.47 |
| FY06 | FMIT | 89,606 | 71,827 | $1,723.84 | $198.96 | $205.70 | $1,319.18 |
| | Fredonia | 1,441,919 | 1,155,819 | $27,739.65 | $3,201.62 | $3,534.41 | $21,003.62 |
| | Thatcher | 3,513,900 | 2,816,685 | $67,600.44 | $7,802.22 | $10,043.00 | $49,755.22 |
| | Wickenburg | 543,853 | 435,944 | $10,462.65 | $1,207.56 | $1,320.11 | $7,934.97 |
| | YID | 512,300 | 410,651 | $9,855.63 | $1,137.50 | $1,669.80 | $7,048.33 |
| | **FY06 Total** | 6,101,578 | 4,890,926 | $117,382.21 | $13,547.86 | $16,773.02 | $87,061.33 |
| FY07 | FMIT | 89,606 | 63,821 | $1,531.71 | $176.79 | $205.70 | $1,149.23 |
| | Fredonia | 1,441,919 | 1,027,000 | $24,648.00 | $2,844.79 | $3,534.41 | $18,268.80 |
| | Thatcher | 3,513,900 | 2,502,759 | $60,066.21 | $6,932.64 | $10,043.00 | $43,090.57 |
| | Wickenburg | 543,853 | 387,357 | $9,296.56 | $1,072.98 | $1,320.11 | $6,903.47 |
| | YID | 512,300 | 364,883 | $8,757.20 | $1,010.73 | $1,669.80 | $6,076.67 |
| | **FY07 Total** | 6,101,578 | 4,345,821 | $104,299.69 | $12,037.92 | $16,773.02 | $75,488.75 |
| FY08 | FMIT | 89,606 | 59,329 | $1,423.89 | $164.34 | $205.70 | $1,053.85 |
| | Fredonia | 1,441,919 | 954,707 | $22,912.96 | $2,644.54 | $3,534.41 | $16,734.01 |
| | Thatcher | 3,513,900 | 2,326,583 | $55,837.98 | $6,444.63 | $10,043.00 | $39,350.35 |
| | Wickenburg | 543,853 | 360,090 | $8,642.15 | $997.45 | $1,320.11 | $6,324.59 |
| | YID | 512,300 | 339,198 | $8,140.75 | $939.58 | $1,669.80 | $5,531.38 |
| | **FY08 Total** | 6,101,578 | 4,039,906 | $96,957.74 | $11,190.54 | $16,773.02 | $68,994.18 |
| FY05-FY08 Total | FMIT | 358,424 | 218,275 | $5,238.59 | $604.62 | $822.80 | $3,811.17 |
| | Fredonia | 5,767,676 | 3,512,424 | $84,298.19 | $9,729.42 | $14,137.64 | $60,431.13 |
| | Thatcher | 14,055,600 | 8,559,640 | $205,431.37 | $23,710.20 | $40,172.00 | $141,549.17 |
| | Wickenburg | 2,175,412 | 1,324,792 | $31,795.00 | $3,669.67 | $5,280.44 | $22,844.89 |
| | YID | 2,049,200 | 1,247,931 | $29,950.34 | $3,456.77 | $6,679.20 | $19,814.37 |
| | **FY05-FY08 Total** | 24,406,312 | 14,863,062 | $356,713.49 | $41,170.68 | $67,092.08 | $248,450.73 |

**Total Cost to Non-Rounded (NR) Contractors**

| | |
|---|---|
| NR Contractor's Share of Contract Capacity = | 97.21% (with rounded up allocations) |
| NR Contractor's Share of Contract Energy = | 97.20% (with rounded up allocations) |
| **NR Contractor's Share of Rate Costs =** | **97.20%** |
| NR Contractor's Share of Excess Energy = | 90.17% (based on current excess energy methodology) |
| Lost Opportunity Cost of Excess Energy = | $21.23 /MWh    (PV off-peak minus PD energy rate) |
| Lost Opportunity Cost of Excess Energy (after 6-1-05) = | $17.73 /MWh    (Reduced by average surcharge of $3.5/MWh) |

| | A Net Cost to Rate ($) | NR Contractors Rate Share (%) | NR Contractors Rate Cost ($) | A/276.321 NR Contractors Rate Cost ($/MW Alloc.) | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B Lost Opportunity Cost ($) | B/276.321 Lost Opportunity Cost ($/MW Alloc.) |
|---|---|---|---|---|---|---|---|---|
| FY05 | $16,906.47 | 97.20% | $16,433.82 | $59.47 | 4,515,480 | 4,071,608 | $81,737.54 | $295.81 |
| FY06 | $87,061.33 | 97.20% | $84,627.35 | $306.26 | 1,210,736 | 1,091,721 | $19,356.21 | $70.05 |
| FY07 | $75,488.75 | 97.20% | $73,378.31 | $265.55 | 1,755,879 | 1,583,276 | $28,071.48 | $101.59 |
| FY08 | $68,994.18 | 97.20% | $67,065.31 | $242.71 | 2,061,815 | 1,859,138 | $32,962.53 | $119.29 |
| Total | | | $241,504.78 | $874.00 | | | $162,127.76 | $586.74 |

# Analysis of Cost Impact of Rounded Allocations
## Energy for Allocations at Parker-Davis Rate
### (Prices at WALC FY03 Lowest Month Sales - Low Option)

**Assumptions**

1. Energy for rounded allocations supplied at Parker-Davis rate even if purchases are required.
2. Purchases made in off-peak and shoulder hours at an WALC FY03 lowest month sale price =    $15.00 /MWh
3. Lost opportunity cost for excess energy = Purchase price rate less P-D energy rate (& surcharge when applicable).
4. FY04 Rate Brochure used for Parker-Davis Rates
5. Impact to Parker-Davis generation customers only.

## Analysis A - MWD Takes Surplus Water

**Rate Impact**

| | Contractor | Add. Energy (KWh) | Est. Energy Purchased (KWh) | A Purchases Cost ($) | B Add. Energy Revenue ($) | C Add. Capacity Revenue ($) | (A - B - C) Net Cost to Rate ($) |
|---|---|---|---|---|---|---|---|
| FY05 | FMIT | 89,606 | 23,298 | $349.46 | $64.53 | $205.70 | $79.23 |
| | Fredonia | 1,441,919 | 374,899 | $5,623.48 | $1,038.47 | $3,534.41 | $1,050.60 |
| | Thatcher | 3,513,900 | 913,614 | $13,704.21 | $2,530.71 | $10,043.00 | $1,130.50 |
| | Wickenburg | 543,853 | 141,402 | $2,121.03 | $391.68 | $1,320.11 | $409.23 |
| | YID | 512,300 | 133,198 | $1,997.97 | $368.96 | $1,669.80 | -$40.79 |
| | **FY05 Total** | 6,101,578 | 1,586,410 | $23,796.15 | $4,394.36 | $16,773.02 | $2,628.78 |
| FY06 | FMIT | 89,606 | 71,827 | $1,077.40 | $198.96 | $205.70 | $672.74 |
| | Fredonia | 1,441,919 | 1,155,819 | $17,337.28 | $3,201.62 | $3,534.41 | $10,601.25 |
| | Thatcher | 3,513,900 | 2,816,685 | $42,250.27 | $7,802.22 | $10,043.00 | $24,405.06 |
| | Wickenburg | 543,853 | 435,944 | $6,539.16 | $1,207.56 | $1,320.11 | $4,011.48 |
| | YID | 512,300 | 410,651 | $6,159.77 | $1,137.50 | $1,669.80 | $3,352.47 |
| | **FY06 Total** | 6,101,578 | 4,890,926 | $73,363.88 | $13,547.86 | $16,773.02 | $43,043.00 |
| FY07 | FMIT | 89,606 | 63,821 | $957.32 | $176.79 | $205.70 | $574.84 |
| | Fredonia | 1,441,919 | 1,027,000 | $15,405.00 | $2,844.79 | $3,534.41 | $9,025.80 |
| | Thatcher | 3,513,900 | 2,502,759 | $37,541.38 | $6,932.64 | $10,043.00 | $20,565.74 |
| | Wickenburg | 543,853 | 387,357 | $5,810.35 | $1,072.98 | $1,320.11 | $3,417.26 |
| | YID | 512,300 | 364,883 | $5,473.25 | $1,010.73 | $1,669.80 | $2,792.72 |
| | **FY07 Total** | 6,101,578 | 4,345,821 | $65,187.31 | $12,037.92 | $16,773.02 | $36,376.37 |
| FY08 | FMIT | 89,606 | 59,329 | $889.93 | $164.34 | $205.70 | $519.89 |
| | Fredonia | 1,441,919 | 954,707 | $14,320.60 | $2,644.54 | $3,534.41 | $8,141.65 |
| | Thatcher | 3,513,900 | 2,326,583 | $34,898.74 | $6,444.63 | $10,043.00 | $18,411.10 |
| | Wickenburg | 543,853 | 360,090 | $5,401.34 | $997.45 | $1,320.11 | $3,083.79 |
| | YID | 512,300 | 339,198 | $5,087.97 | $939.58 | $1,669.80 | $2,478.59 |
| | **FY08 Total** | 6,101,578 | 4,039,906 | $60,598.59 | $11,190.54 | $16,773.02 | $32,635.03 |
| FY05-FY08 Total | FMIT | 358,424 | 218,275 | $3,274.12 | $604.62 | $822.80 | $1,846.70 |
| | Fredonia | 5,767,676 | 3,512,424 | $52,686.37 | $9,729.42 | $14,137.64 | $28,819.31 |
| | Thatcher | 14,055,600 | 8,559,640 | $128,394.61 | $23,710.20 | $40,172.00 | $64,512.40 |
| | Wickenburg | 2,175,412 | 1,324,792 | $19,871.88 | $3,669.67 | $5,280.44 | $10,921.76 |
| | YID | 2,049,200 | 1,247,931 | $18,718.96 | $3,456.77 | $6,679.20 | $8,582.99 |
| | **FY05-FY08 Total** | 24,406,312 | 14,863,062 | $222,945.93 | $41,170.68 | $67,092.08 | $114,683.17 |

### Total Cost to Non-Rounded (NR) Contractors

NR Contractor's Share of Contract Capacity =    97.21% (with rounded up allocations)
NR Contractor's Share of Contract Energy =    97.20% (with rounded up allocations)
**NR Contractor's Share of Rate Costs =    97.20%**

**NR Contractor's Share of Excess Energy =**    90.17% (based on current excess energy methodology)
**Lost Opportunity Cost of Excess Energy =**    $12.23 /MWh    (PV off-peak minus PD energy rate)
**Lost Opportunity Cost of Excess Energy (after 6-1-05) =**    $8.73 /MWh    (Reduced by average surcharge of $3.5/MWh)

| | Net Cost to Rate ($) | NR Contractors Rate Share (%) | A NR Contractors Rate Cost ($) | A/276.321 NR Contractors Rate Cost ($/MW Alloc.) | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B Lost Opportunity Cost ($) | B/276.321 Lost Opportunity Cost ($/MW Alloc.) |
|---|---|---|---|---|---|---|---|---|
| FY05 | $2,628.78 | 97.20% | $2,555.28 | $9.25 | 4,515,480 | 4,071,608 | $45,093.06 | $163.19 |
| FY06 | $43,043.00 | 97.20% | $41,839.64 | $151.42 | 1,210,736 | 1,091,721 | $9,530.72 | $34.49 |
| FY07 | $36,376.37 | 97.20% | $35,359.39 | $127.96 | 1,755,879 | 1,583,276 | $13,822.00 | $50.02 |
| FY08 | $32,635.03 | 97.20% | $31,722.65 | $114.80 | 2,061,815 | 1,859,138 | $16,230.28 | $58.74 |
| Total | | | $111,476.97 | $403.43 | | | $84,676.06 | $306.44 |

## Analysis of Cost Impact of Rounded Allocations
## Energy for Allocations at Parker-Davis Rate
## (Prices at WALC FY03 Lowest Month Sales - Low Option)

### Analysis B - MWD Does Not Take Surplus Water

**Rate Impact**

| | Contractor | Add. Energy (KWh) | Est. Energy Purchased (KWh) | Purchases Cost ($) | Add. Energy Revenue ($) | Add. Capacity Revenue ($) | Net Cost to Rate ($) |
|---|---|---|---|---|---|---|---|
| **FY05** | FMIT | 89,606 | 80,971 | $1,214.57 | $224.29 | $205.70 | **$784.58** |
| | Fredonia | 1,441,919 | 1,302,973 | $19,544.60 | $3,609.24 | $3,534.41 | **$12,400.95** |
| | Thatcher | 3,513,900 | 3,175,294 | $47,629.41 | $8,795.56 | $10,043.00 | **$28,790.85** |
| | Wickenburg | 543,853 | 491,446 | $7,371.69 | $1,361.31 | $1,320.11 | **$4,690.28** |
| | YID | 512,300 | 462,934 | $6,944.01 | $1,282.33 | $1,669.80 | **$3,991.88** |
| | **FY05 Total** | 6,101,578 | 5,513,619 | $82,704.28 | $15,272.72 | $16,773.02 | **$50,658.54** |
| **FY06** | FMIT | 89,606 | 80,971 | $1,214.57 | $224.29 | $205.70 | **$784.58** |
| | Fredonia | 1,441,919 | 1,302,973 | $19,544.60 | $3,609.24 | $3,534.41 | **$12,400.95** |
| | Thatcher | 3,513,900 | 3,175,294 | $47,629.41 | $8,795.56 | $10,043.00 | **$28,790.85** |
| | Wickenburg | 543,853 | 491,446 | $7,371.69 | $1,361.31 | $1,320.11 | **$4,690.28** |
| | YID | 512,300 | 462,934 | $6,944.01 | $1,282.33 | $1,669.80 | **$3,991.88** |
| | **FY06 Total** | 6,101,578 | 5,513,619 | $82,704.28 | $15,272.72 | $16,773.02 | **$50,658.54** |
| **FY07** | FMIT | 89,606 | 80,162 | $1,202.43 | $222.05 | $205.70 | **$774.68** |
| | Fredonia | 1,441,919 | 1,289,943 | $19,349.15 | $3,573.14 | $3,534.41 | **$12,241.60** |
| | Thatcher | 3,513,900 | 3,143,541 | $47,153.12 | $8,707.61 | $10,043.00 | **$28,402.51** |
| | Wickenburg | 543,853 | 486,532 | $7,297.98 | $1,347.69 | $1,320.11 | **$4,630.17** |
| | YID | 512,300 | 458,304 | $6,874.57 | $1,269.50 | $1,669.80 | **$3,935.26** |
| | **FY07 Total** | 6,101,578 | 5,458,482 | $81,877.24 | $15,120.00 | $16,773.02 | **$49,984.22** |
| **FY08** | FMIT | 89,606 | 79,352 | $1,190.28 | $219.80 | $205.70 | **$764.77** |
| | Fredonia | 1,441,919 | 1,276,914 | $19,153.70 | $3,537.05 | $3,534.41 | **$12,082.24** |
| | Thatcher | 3,513,900 | 3,111,788 | $46,676.82 | $8,619.65 | $10,043.00 | **$28,014.17** |
| | Wickenburg | 543,853 | 481,617 | $7,224.26 | $1,334.08 | $1,320.11 | **$4,570.07** |
| | YID | 512,300 | 453,675 | $6,805.13 | $1,256.68 | $1,669.80 | **$3,878.65** |
| | **FY08 Total** | 6,101,578 | 5,403,346 | $81,050.19 | $14,967.27 | $16,773.02 | **$49,309.91** |
| **FY05-FY08** | FMIT | 358,424 | 321,456 | $4,821.85 | $890.43 | $822.80 | **$3,108.61** |
| **Total** | Fredonia | 5,767,676 | 5,172,803 | $77,592.04 | $14,328.66 | $14,137.64 | **$49,125.74** |
| | Thatcher | 14,055,600 | 12,605,918 | $189,088.76 | $34,918.39 | $40,172.00 | **$113,998.37** |
| | Wickenburg | 2,175,412 | 1,951,042 | $29,265.63 | $5,404.39 | $5,280.44 | **$18,580.80** |
| | YID | 2,049,200 | 1,837,847 | $27,567.71 | $5,090.84 | $6,679.20 | **$15,797.67** |
| | **FY05-FY08 Total** | **24,406,312** | **21,889,066** | **$328,335.99** | **$60,632.71** | **$67,092.08** | **$200,611.20** |

**Total Cost to Non-Rounded (NR) Contractors**

| | | |
|---|---|---|
| NR Contractor's Share of Contract Capacity = | 97.21% | (with rounded up allocations) |
| NR Contractor's Share of Contract Energy = | 97.20% | (with rounded up allocations) |
| **NR Contractor's Share of Rate Costs =** | **97.20%** | |
| **NR Contractor's Share of Excess Energy =** | **90.17%** | (based on current excess energy methodology) |
| **Lost Opportunity Cost of Excess Energy =** | **$12.23** /MWh | (PV off-peak minus PD energy rate) |
| **Lost Opportunity Cost of Excess Energy (after 6-1-05) =** | **$8.73** /MWh | (Reduced by average surcharge of $3.5/MWh) |

| | | | A | A/276.321 | | | B | B/276.321 |
|---|---|---|---|---|---|---|---|---|
| | Net Cost to Rate ($) | NR Contractors Rate Share (%) | NR Contractors Rate Cost ($) | **NR Contractors Rate Cost ($/MW Alloc.)** | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | Lost Opportunity Cost ($) | Lost Opportunity Cost ($/MW Alloc.) |
| **FY05** | $50,658.54 | 97.20% | $49,242.27 | $178.21 | 588,000 | 530,200 | $5,871.96 | $21.25 |
| **FY06** | $50,658.54 | 97.20% | $49,242.27 | $178.21 | 588,000 | 530,200 | $4,628.64 | $16.75 |
| **FY07** | $49,984.22 | 97.20% | $48,586.81 | $175.83 | 643,140 | 579,919 | $5,062.70 | $18.32 |
| **FY08** | $49,309.91 | 97.20% | $47,931.35 | $173.46 | 698,280 | 629,639 | $5,496.75 | $19.89 |
| **Total** | | | **$195,002.70** | **$705.71** | | | **$21,060.05** | **$76.22** |

# Attachment 2
## Analysis of Cost Impact of Rounded Allocations
## Energy for Allocations at Parker-Davis Rate
## Summary

### Analysis A - MWD Takes Surplus Water

|  | NR Contractors Rate Cost ($/MW Alloc.) | Lost Opportunity Cost ($/MW Alloc.) | NR Contractors Total Impact ($/MW Alloc.) |
|---|---|---|---|
| High Option Energy Price ($34.50/MWh) | $1,423.00 | $913.75 | $2,336.75 |
| Med Option Energy Price ($24.00/MWh) | $874.00 | $586.74 | $1,460.74 |
| Low Option Energy Price ($15.00/MWh) | $403.43 | $306.44 | $709.87 |

### Analysis B - MWD Does Not Take Surplus Water

|  | NR Contractors Rate Cost ($/MW Alloc.) | Lost Opportunity Cost ($/MW Alloc.) | NR Contractors Total Impact ($/MW Alloc.) |
|---|---|---|---|
| High Option Energy Price ($34.50/MWh) | $2,207.24 | $236.41 | $2,443.65 |
| Med Option Energy Price ($24.00/MWh) | $1,398.72 | $150.15 | $1,548.87 |
| Low Option Energy Price ($15.00/MWh) | $705.71 | $76.22 | $781.93 |

**Assumptions**

1. Energy for rounded allocations supplied at Parker-Davis rate only if excess is available.
2. Remaining energy for rounded allocations either not supplied or purchased on pass-through basis.
3. Capacity payment for rounded allocations made even when excess not available.
4. Lost opportunity cost for excess energy = PV off-peak index rate less P-D energy rate (& surcharge when applicable).
5. FY04 Rate Brochure used for Parker-Davis Rates
6. Impact to Parker-Davis generation customers only.
7. PV off-peak rate used =          $34.50 /MWh

### Analysis A - MWD Takes Surplus Water

**Rate Impact**

| | Contractor | Add. Capacity Revenue ($) | Net Cost to Rate ($) |
|---|---|---|---|
| **FY05** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY05 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY06** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY06 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY07** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY07 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY08** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY08 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY05-FY08** | FMIT | $822.80 | -$822.80 |
| **Total** | Fredonia | $14,137.64 | -$14,137.64 |
| | Thatcher | $40,172.00 | -$40,172.00 |
| | Wickenburg | $5,280.44 | -$5,280.44 |
| | YID | $6,679.20 | -$6,679.20 |
| | **FY05-FY08 Total** | $67,092.08 | -$67,092.08 |

**Total Cost to Non-Rounded (NR) Contractors**

| | | |
|---|---|---|
| NR Contractor's Share of Contract Capacity = | 97.21% | (with rounded up allocations) |
| NR Contractor's Share of Contract Energy = | 97.64% | (with rounded up allocations) |
| **NR Contractor's Share of Rate Costs =** | **97.42%** | |
| | | |
| **NR Contractor's Share of Excess Energy =** | **90.17%** | (based on current excess energy methodology) |
| **Lost Opportunity Cost of Excess Energy =** | **$31.73** /MWh | (PV off-peak minus PD energy rate) |
| **Lost Opportunity Cost of Excess Energy (after 6-1-05) =** | **$28.23** /MWh | (Reduced by average surcharge of $3.5/MWh) |

| | Net Cost to Rate ($) | NR Contractors Rate Share (%) | A NR Contractors Rate Cost ($) | A/276.321 **NR Contractors Rate Cost ($/MW Alloc.)** | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B Lost Opportunity Cost ($) | B/276.321 Lost **Opportunity Cost ($/MW Alloc.)** |
|---|---|---|---|---|---|---|---|---|
| FY05 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 4,515,480 | 4,071,608 | $124,489.42 | $450.52 |
| FY06 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 1,210,736 | 1,091,721 | $30,819.28 | $111.53 |
| FY07 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 1,755,879 | 1,583,276 | $44,695.88 | $161.75 |
| FY08 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 2,061,815 | 1,859,138 | $52,483.48 | $189.94 |
| Total | | | -$65,364.22 | -$236.55 | | | $252,488.06 | $913.75 |

**Analysis of Cost Impact of Rounded Allocations**
**Excess Energy Only at Parker-Davis Rate**
**(Prices at PV Index - High Option)**

**Analysis B - MWD Does Not Take Surplus Water**

**Rate Impact**

| | Contractor | Add. Capacity Revenue ($) | Net Cost to Rate ($) |
|---|---|---|---|
| **FY05** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY05 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY06** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY06 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY07** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY07 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY08** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY08 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY05-FY08** | FMIT | $822.80 | -$822.80 |
| **Total** | Fredonia | $14,137.64 | -$14,137.64 |
| | Thatcher | $40,172.00 | -$40,172.00 |
| | Wickenburg | $5,280.44 | -$5,280.44 |
| | YID | $6,679.20 | -$6,679.20 |
| | **FY05-FY08 Total** | $67,092.08 | -$67,092.08 |

**Total Cost to Non-Rounded (NR) Contractors**

NR Contractor's Share of Contract Capacity =        97.21% (with rounded up allocations)
NR Contractor's Share of Contract Energy =          97.64% (with rounded up allocations)
**NR Contractor's Share of Rate Costs =**           **97.42%**

**NR Contractor's Share of Excess Energy =**        **90.17%** (based on current excess energy methodology)
**Lost Opportunity Cost of Excess Energy =**        **$31.73** /MWh        (PV off-peak minus PD energy rate)
**Lost Opportunity Cost of Excess Energy (after 6-1-05) =**   **$28.23** /MWh   (Reduced by average surcharge of $3.5/MWh)

| | Net Cost to Rate ($) | NR Contractors Rate Share (%) | A NR Contractors Rate Cost ($) | A/276.321 **NR Contractors Rate Cost ($/MW Alloc.)** | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B Lost Opportunity Cost ($) | B/276.321 Lost **Opportunity Cost ($/MW Alloc.)** |
|---|---|---|---|---|---|---|---|---|
| **FY05** | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 588,000 | 530,200 | $16,210.85 | $58.67 |
| **FY06** | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 588,000 | 530,200 | $14,967.53 | $54.17 |
| **FY07** | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 643,140 | 579,919 | $16,371.12 | $59.25 |
| **FY08** | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 698,280 | 629,639 | $17,774.71 | $64.33 |
| **Total** | | | -$65,364.22 | -$236.55 | | | $65,324.22 | $236.41 |

<u>Assumptions</u>

1. Energy for rounded allocations supplied at Parker-Davis rate only if excess is available.
2. Remaining energy for rounded allocations either not supplied or purchased on pass-through basis.
3. Capacity payment for rounded allocations made even when excess not available.
4. Lost opportunity cost for excess energy = WALC FY03 average sales price less P-D energy rate (& surcharge when applicable).
5. FY04 Rate Brochure used for Parker-Davis Rates
6. Impact to Parker-Davis generation customers only.
7. WALC FY03 Average Sales Price =                $24.00 /MWh

**Analysis A - MWD Takes Surplus Water**

<u>Rate Impact</u>

| | Contractor | Add. Capacity Revenue ($) | Net Cost to Rate ($) |
|---|---|---|---|
| **FY05** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY05 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY06** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY06 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY07** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY07 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY08** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY08 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY05-FY08** | FMIT | $822.80 | -$822.80 |
| **Total** | Fredonia | $14,137.64 | -$14,137.64 |
| | Thatcher | $40,172.00 | -$40,172.00 |
| | Wickenburg | $5,280.44 | -$5,280.44 |
| | YID | $6,679.20 | -$6,679.20 |
| | **FY05-FY08 Total** | $67,092.08 | -$67,092.08 |

<u>Total Cost to Non-Rounded (NR) Contractors</u>

| | | |
|---|---|---|
| NR Contractor's Share of Contract Capacity = | 97.21% | (with rounded up allocations) |
| NR Contractor's Share of Contract Energy = | 97.64% | (with rounded up allocations) |
| **NR Contractor's Share of Rate Costs =** | **97.42%** | |
| | | |
| NR Contractor's Share of Excess Energy = | 90.17% | (based on current excess energy methodology) |
| Lost Opportunity Cost of Excess Energy = | $21.23 /MWh | (PV off-peak minus PD energy rate) |
| Lost Opportunity Cost of Excess Energy (after 6-1-05) = | $17.73 /MWh | (Reduced by average surcharge of $3.5/MWh) |

| | Net Cost to Rate ($) | NR Contractors Rate Share (%) | NR Contractors Rate Cost ($) | **A** **A/276.321** **NR Contractors Rate Cost ($/MW Alloc.)** | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | **B** Lost Opportunity Cost ($) | **B/276.321** Lost Opportunity Cost ($/MW Alloc.) |
|---|---|---|---|---|---|---|---|---|
| FY05 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 4,515,480 | 4,071,608 | $81,737.54 | $295.81 |
| FY06 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 1,210,736 | 1,091,721 | $19,356.21 | $70.05 |
| FY07 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 1,755,879 | 1,583,276 | $28,071.48 | $101.59 |
| FY08 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 2,061,815 | 1,859,138 | $32,962.53 | $119.29 |
| Total | | | -$65,364.22 | -$236.55 | | | $162,127.76 | $586.74 |

# Analysis of Cost Impact of Rounded Allocations
## Excess Energy Only at Parker-Davis Rate
### (Prices at WALC FY03 Avg Sales - Med Option)

**Analysis B - MWD Does Not Take Surplus Water**

## Rate Impact

| | Contractor | Add. Capacity Revenue ($) | Net Cost to Rate ($) |
|---|---|---|---|
| **FY05** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY05 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY06** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY06 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY07** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY07 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY08** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY08 Total** | $16,773.02 | -$16,773.02 |
| | | | |
| **FY05-FY08** | FMIT | $822.80 | -$822.80 |
| **Total** | Fredonia | $14,137.64 | -$14,137.64 |
| | Thatcher | $40,172.00 | -$40,172.00 |
| | Wickenburg | $5,280.44 | -$5,280.44 |
| | YID | $6,679.20 | -$6,679.20 |
| | **FY05-FY08 Total** | $67,092.08 | -$67,092.08 |

## Total Cost to Non-Rounded (NR) Contractors

NR Contractor's Share of Contract Capacity =     97.21% (with rounded up allocations)
NR Contractor's Share of Contract Energy =     97.64% (with rounded up allocations)
**NR Contractor's Share of Rate Costs =**     **97.42%**

**NR Contractor's Share of Excess Energy =**     **90.17%** (based on current excess energy methodology)
**Lost Opportunity Cost of Excess Energy =**     **$21.23** /MWh     (PV off-peak minus PD energy rate)
**Lost Opportunity Cost of Excess Energy (after 6-1-05) =**     **$17.73** /MWh     (Reduced by average surcharge of $3.5/MWh)

| | Net Cost to Rate ($) | NR Contractors Rate Share (%) | A NR Contractors Rate Cost ($) | A/276.321 **NR Contractors Rate Cost ($/MW Alloc.)** | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B Lost Opportunity Cost ($) | B/276.321 **Lost Opportunity Cost ($/MW Alloc.)** |
|---|---|---|---|---|---|---|---|---|
| **FY05** | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 588,000 | 530,200 | $10,643.76 | $38.52 |
| **FY06** | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 588,000 | 530,200 | $9,400.44 | $34.02 |
| **FY07** | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 643,140 | 579,919 | $10,281.97 | $37.21 |
| **FY08** | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 698,280 | 629,639 | $11,163.50 | $40.40 |
| **Total** | | | -$65,364.22 | -$236.55 | | | $41,489.67 | $150.15 |

**Assumptions**

1. Energy for rounded allocations supplied at Parker-Davis rate only if excess is available.
2. Remaining energy for rounded allocations either not supplied or purchased on pass-through basis.
3. Capacity payment for rounded allocations made even when excess not available.
4. Lost opportunity cost for excess energy = WALC FY03 lowest month average sales price less P-D energy rate (& surcharge when applicable).
5. FY04 Rate Brochure used for Parker-Davis Rates
6. Impact to Parker-Davis generation customers only.
7. WALC Lowest Month Average Sales Price = $15.00 /MWh

### Analysis A - MWD Takes Surplus Water

**Rate Impact**

| | Contractor | Add. Capacity Revenue ($) | Net Cost to Rate ($) |
|---|---|---|---|
| **FY05** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY05 Total** | $16,773.02 | -$16,773.02 |
| **FY06** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY06 Total** | $16,773.02 | -$16,773.02 |
| **FY07** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY07 Total** | $16,773.02 | -$16,773.02 |
| **FY08** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY08 Total** | $16,773.02 | -$16,773.02 |
| **FY05-FY08 Total** | FMIT | $822.80 | -$822.80 |
| | Fredonia | $14,137.64 | -$14,137.64 |
| | Thatcher | $40,172.00 | -$40,172.00 |
| | Wickenburg | $5,280.44 | -$5,280.44 |
| | YID | $6,679.20 | -$6,679.20 |
| | **FY05-FY08 Total** | $67,092.08 | -$67,092.08 |

**Total Cost to Non-Rounded (NR) Contractors**

| | | |
|---|---|---|
| NR Contractor's Share of Contract Capacity = | 97.21% | (with rounded up allocations) |
| NR Contractor's Share of Contract Energy = | 97.64% | (with rounded up allocations) |
| **NR Contractor's Share of Rate Costs =** | **97.42%** | |
| | | |
| NR Contractor's Share of Excess Energy = | 90.17% | (based on current excess energy methodology) |
| Lost Opportunity Cost of Excess Energy = | $12.23 /MWh | (PV off-peak minus PD energy rate) |
| Lost Opportunity Cost of Excess Energy (after 6-1-05) = | $8.73 /MWh | (Reduced by average surcharge of $3.5/MWh) |

| | Net Cost to Rate ($) | NR Contractors Rate Share (%) | A NR Contractors Rate Cost ($) | A/276.321 NR Contractors Rate Cost ($/MW Alloc.) | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B Lost Opportunity Cost ($) | B/276.321 Lost Opportunity Cost ($/MW Alloc.) |
|---|---|---|---|---|---|---|---|---|
| FY05 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 4,515,480 | 4,071,608 | $45,093.06 | $163.19 |
| FY06 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 1,210,736 | 1,091,721 | $9,530.72 | $34.49 |
| FY07 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 1,755,879 | 1,583,276 | $13,822.00 | $50.02 |
| FY08 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 2,061,815 | 1,859,138 | $16,230.28 | $58.74 |
| Total | | | -$65,364.22 | -$236.55 | | | $84,676.06 | $306.44 |

**Analysis of Cost Impact of Rounded Allocations**
**Excess Energy Only at Parker-Davis Rate**
**(Prices at WALC FY03 Lowest Month Sales - Low Option)**

**Analysis B - MWD Does Not Take Surplus Water**

## Rate Impact

| | Contractor | Add. Capacity Revenue ($) | Net Cost to Rate ($) |
|---|---|---|---|
| **FY05** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY05 Total** | $16,773.02 | -$16,773.02 |
| **FY06** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY06 Total** | $16,773.02 | -$16,773.02 |
| **FY07** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY07 Total** | $16,773.02 | -$16,773.02 |
| **FY08** | FMIT | $205.70 | -$205.70 |
| | Fredonia | $3,534.41 | -$3,534.41 |
| | Thatcher | $10,043.00 | -$10,043.00 |
| | Wickenburg | $1,320.11 | -$1,320.11 |
| | YID | $1,669.80 | -$1,669.80 |
| | **FY08 Total** | $16,773.02 | -$16,773.02 |
| **FY05-FY08 Total** | FMIT | $822.80 | -$822.80 |
| | Fredonia | $14,137.64 | -$14,137.64 |
| | Thatcher | $40,172.00 | -$40,172.00 |
| | Wickenburg | $5,280.44 | -$5,280.44 |
| | YID | $6,679.20 | -$6,679.20 |
| | **FY05-FY08 Total** | $67,092.08 | -$67,092.08 |

## Total Cost to Non-Rounded (NR) Contractors

NR Contractor's Share of Contract Capacity =     97.21% (with rounded up allocations)
NR Contractor's Share of Contract Energy =     97.64% (with rounded up allocations)
**NR Contractor's Share of Rate Costs =**     **97.42%**

**NR Contractor's Share of Excess Energy =**     **90.17%** (based on current excess energy methodology)
**Lost Opportunity Cost of Excess Energy =**     **$12.23** /MWh     (PV off-peak minus PD energy rate)
**Lost Opportunity Cost of Excess Energy (after 6-1-05) =**     **$8.73** /MWh     (Reduced by average surcharge of $3.5/MWh)

| | Net Cost to Rate ($) | NR Contractors Rate Share (%) | A NR Contractors Rate Cost ($) | A/276.321 **NR Contractors Rate Cost ($/MW Alloc.)** | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B Lost Opportunity Cost ($) | B/276.321 Lost Opportunity Cost ($/MW Alloc.) |
|---|---|---|---|---|---|---|---|---|
| FY05 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 588,000 | 530,200 | $5,871.96 | $21.25 |
| FY06 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 588,000 | 530,200 | $4,628.64 | $16.75 |
| FY07 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 643,140 | 579,919 | $5,062.70 | $18.32 |
| FY08 | -$16,773.02 | 97.42% | -$16,341.05 | -$59.14 | 698,280 | 629,639 | $5,496.75 | $19.89 |
| Total | | | -$65,364.22 | -$236.55 | | | $21,060.05 | $76.22 |

## Attachment 3
## Analysis of Cost Impact of Rounded Allocations
## Excess Energy Only at Parker-Davis Rate
## Summary

### Analysis A - MWD Takes Surplus Water

|  | NR Contractors Rate Cost ($/MW Alloc.) | Lost Opportunity Cost ($/MW Alloc.) | NR Contractors Total Impact ($/MW Alloc.) |
|---|---|---|---|
| High Option Energy Price ($34.50/MWh) | (236.55) | 913.75 | 677.20 |
| Med Option Energy Price ($24.00/MWh) | (236.55) | 586.74 | 350.19 |
| Low Option Energy Price ($15.00/MWh) | (236.55) | 306.44 | 69.89 |

### Analysis B - MWD Does Not Take Surplus Water

|  | NR Contractors Rate Cost ($/MW Alloc.) | Lost Opportunity Cost ($/MW Alloc.) | NR Contractors Total Impact ($/MW Alloc.) |
|---|---|---|---|
| High Option Energy Price ($34.50/MWh) | (236.55) | 236.41 | (0.14) |
| Med Option Energy Price ($24.00/MWh) | (236.55) | 150.15 | (86.40) |
| Low Option Energy Price ($15.00/MWh) | (236.55) | 76.22 | (160.34) |

# Analysis of Cost Impact of Rounded Allocations
## (All Excess Energy Available)

**Assumptions**

1. Energy for rounded allocations supplied at Parker-Davis rate only if excess is available.
2. Remaining energy for rounded allocations either not supplied or purchased on pass-through basis.
3. Capacity payment for rounded allocations made even when excess not available.
4. Replacement cost for excess energy = PV off-peak index rate less P-D energy rate (& surcharge when applicable).
5. FY04 Rate Brochure used for Parker-Davis Rates
6. Impact to Parker-Davis generation customers only.
7. PV off-peak rate used =                    $34.50 /MWh

### Analysis A - MWD Takes Surplus Water

**Rate Impact**

|  | Contractor | Add. Capacity Revenue ($) | Net Cost to Rate ($) |
|---|---|---|---|
| **FY05** | FMIT | $205.70 | -$205.70 |
|  | Fredonia | $3,534.41 | -$3,534.41 |
|  | Thatcher | $10,043.00 | -$10,043.00 |
|  | Wickenburg | $1,320.11 | -$1,320.11 |
|  | YID | $1,669.80 | -$1,669.80 |
|  | **FY05 Total** | $16,773.02 | -$16,773.02 |
| **FY06** | FMIT | $205.70 | -$205.70 |
|  | Fredonia | $3,534.41 | -$3,534.41 |
|  | Thatcher | $10,043.00 | -$10,043.00 |
|  | Wickenburg | $1,320.11 | -$1,320.11 |
|  | YID | $1,669.80 | -$1,669.80 |
|  | **FY06 Total** | $16,773.02 | -$16,773.02 |
| **FY07** | FMIT | $205.70 | -$205.70 |
|  | Fredonia | $3,534.41 | -$3,534.41 |
|  | Thatcher | $10,043.00 | -$10,043.00 |
|  | Wickenburg | $1,320.11 | -$1,320.11 |
|  | YID | $1,669.80 | -$1,669.80 |
|  | **FY07 Total** | $16,773.02 | -$16,773.02 |
| **FY08** | FMIT | $205.70 | -$205.70 |
|  | Fredonia | $3,534.41 | -$3,534.41 |
|  | Thatcher | $10,043.00 | -$10,043.00 |
|  | Wickenburg | $1,320.11 | -$1,320.11 |
|  | YID | $1,669.80 | -$1,669.80 |
|  | **FY08 Total** | $16,773.02 | -$16,773.02 |
| **FY05-FY08 Total** | FMIT | $822.80 | -$822.80 |
|  | Fredonia | $14,137.64 | -$14,137.64 |
|  | Thatcher | $40,172.00 | -$40,172.00 |
|  | Wickenburg | $5,280.44 | -$5,280.44 |
|  | YID | $6,679.20 | -$6,679.20 |
|  | **FY05-FY08 Total** | $67,092.08 | -$67,092.08 |

**Total Cost to Non-Rounded (NR) Contractors**

| | |
|---|---|
| NR Contractor's Share of Contract Capacity = | 97.10% (with rounded up allocations) |
| NR Contractor's Share of Contract Energy = | 97.20% (with rounded up allocations) |
| **NR Contractor's Share of Rate Costs =** | **97.15%** |
| **NR Contractor's Share of Excess Energy =** | **90.17%** (based on current excess energy methodology) |
| **Replacement Cost of Excess Energy =** | **$31.73** /MWh        (PV off-peak minus PD energy rate) |
| **Replacement Cost of Excess Energy (after 6-1-05) =** | **$28.23** /MWh        (Reduced by average surcharge of $3.5/MWh) |

|  | Net Cost to Rate ($) | NR Contractors Rate Share (%) | A NR Contractors Rate Cost ($) | Est. Excess Available (KWh) | Excess Energy Lost (KWh) | B Replacement Cost ($) | (A + B) Total Cost ($) |
|---|---|---|---|---|---|---|---|
| FY05 | -$16,773.02 | 97.15% | -$16,295.29 | 6,102,000 | 5,502,173 | $168,228.95 | $151,933.66 |
| FY06 | -$16,773.02 | 97.15% | -$16,295.29 | 6,102,000 | 5,502,173 | $155,326.36 | $139,031.06 |
| FY07 | -$16,773.02 | 97.15% | -$16,295.29 | 6,102,000 | 5,502,173 | $155,326.36 | $139,031.06 |
| FY08 | -$16,773.02 | 97.15% | -$16,295.29 | 6,102,000 | 5,502,173 | $155,326.36 | $139,031.06 |
| Total |  |  | -$65,181.17 |  |  | $634,208.02 | $569,026.84 |

# Attachment 4
## Cost Savings for Waiving Off-Peak Minimums

On-Peak Energy Cost (PV Index) =     **$53.50** per MWh
Off-Peak Energy Cost (PV Index) =     **$34.50** per MWh
On-Peak/Off-Peak Cost Differential =     **$19.00** per MWh

### Fiscal Year 2003
### Minimum Off-peak Energy Requirement

|  | Thatcher | Wickenburg | Fredonia | AMPS | YID | Total |
|---|---|---|---|---|---|---|
| Oct-02 | 19,500 | 119,340 | 104,676 | 93,600 | 60,840 | 397,956 |
| Nov-02 | 21,000 | 128,520 | 112,728 | 100,800 | 65,520 | 428,568 |
| Dec-02 | 21,500 | 131,580 | 115,412 | 103,200 | 67,080 | 438,772 |
| Jan-03 | 20,500 | 125,460 | 110,044 | 98,400 | 63,960 | 418,364 |
| Feb-03 | 18,000 | 110,160 | 96,624 | 86,400 | 56,160 | 367,344 |
| Mar-03 | 28,700 | 150,634 | 129,314 | 161,540 | 78,720 | 548,908 |
| Apr-03 | 26,600 | 139,612 | 119,852 | 149,720 | 72,960 | 508,744 |
| May-03 | 28,700 | 150,634 | 129,314 | 161,540 | 78,720 | 548,908 |
| Jun-03 | 28,000 | 146,960 | 126,160 | 157,600 | 76,800 | 535,520 |
| Jul-03 | 28,700 | 150,634 | 129,314 | 161,540 | 78,720 | 548,908 |
| Aug-03 | 28,700 | 150,634 | 129,314 | 161,540 | 78,720 | 548,908 |
| Sep-03 | 28,000 | 146,960 | 126,160 | 157,600 | 76,800 | 535,520 |
| **Total** | 297,900 | 1,651,128 | 1,428,912 | 1,593,480 | 855,000 | 5,826,420 |

| | Thatcher | Wickenburg | Fredonia | AMPS | YID | Total |
|---|---|---|---|---|---|---|
| Energy Differential = | **$19.00** | **$19.00** | **$19.00** | **$19.00** | **$19.00** | **$19.00** |
| Annual Cost Savings = | **$5,660.10** | **$31,371.43** | **$27,149.33** | **$30,276.12** | **$16,245.00** | **$110,701.98** |
| 4 Year Savings = | **$22,640.40** | **$125,485.73** | **$108,597.31** | **$121,104.48** | **$64,980.00** | **$442,807.92** |